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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: **Thomas J. Druan, Jr.**

Serial Number: **09/708,658**

GAU: **3724**

Applicant: **Nick Bromer**

Filed: **November 9, 2000**

This paper submitted: **February 18, 2003**

Confirmation No.: **3157**

Title: **BLADE WITH MICROSCOPIC ...**

REPLY TO EXAMINER'S ANSWER

Commissioner for Patents

P.O. Box 1450, Alexandria, VA 22313-1450

Sir:

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The Appellant responds to the Examiner's Answer mailed on May 18, 2004. Below, the Appellant responds sequentially to the Examiner's remarks in the Response to Argument starting on page 5 of the Answer. The Appellant *inter alia* argues: that the Examiner misconstrues specular reflection, confusing it with glare (§ 4); that Machinery's Handbook should not have been applied and should not be given weight, based on the Examiner's admission (§ 6); that the Examiner's rebuttal contains factual errors (§§ 1, 2, 5) and legal errors (§§ 3, 7).

(1) The Examiner admits that Gerber grinds the side of the blade opposite to the surface coating, but argues that the upper face 25 in Fig. 5 results from "hollow grinding" (col. 3, line 1) and infers that such hollow grinding is "like that shown in Fig. 5 of Gerber" (Answer at page 5, line 6 of § 11). The upper

face 25 is apparently ground by a grinding wheel 41 which is part of a grinding assembly 18, shown in Fig. 1 and described at col. 2, line 51.

However, Gerber uses a *different* grinding wheel, namely grinding wheel 43, to sharpen the blade in Fig. 5. The two wheels 41 and 43 are much different in diameter (the honorable Board is invited to note that the same blade 10 appears in both figures and provides a basis for comparing diameters) and 41 is used before 43. Therefore, the Examiner cannot correctly draw any conclusion about the upper, ceramic-coated surface 25 from what Gerber says about the surface produced by the grinding wheel 43 on the lower surface 36. With respect, his conclusion that the upper surface 26 is “like [the lower surface 36] shown in Fig. 5 of Gerber” is not supported in the reference.

The Examiner's citations to cols. 4 and 5 in Gerber are submitted to be irrelevant, as they refer only to Fig. 5 and teach nothing about the finish of the upper surface 25.

(2) At the bottom of page 5, the Examiner states, “the desired smoothness of the cutting edge is limited by the coarsest grinding wheel used, either before or after coating.” This is respectfully submitted to be incorrect, because only the grinding *before* coating relates to the smoothness of the upper, coated surface 25 of Gerber's blade 10, which is the surface at issue.

(3) “It must be true,” the Examiner writes at the bottom of page 5, “that the [coated] surface ... is specular,” and the Examiner argues as follows: if the lower surface 36 were ground finer than the upper coated surface 25, then “the cutting edge would still be ragged and serrated ... Thus, if a smooth cutting portion is desired, then the faces 26 [25] and 36 must be hollow ground using a grit size [like that of wheel 43 in Fig. 5]. Since a fine grit grinding wheel is disclosed [apparently the Examiner means wheel 43], the surface must be at least as specular as the [lower] face.”

This argument is based entirely on inadvertent hindsight reconstruction. The Examiner's logical premise is, “if a smooth cutting portion is desired,” but Gerber does not teach such desire; only the Appellant teaches this, and therefore, hindsight reconstruction must be the basis of the argument. The Examiner applies the Appellant's own teaching against his claims.

Gerber itself actually teaches nothing whatsoever about the smoothness of the coated surface, and honorable Board is invited to note that the Examiner has cited nothing in Gerber relating to this.

(4) In the last paragraph on page 6, the Examiner discusses “specular” and quotes the Appellant's specification. With respect, the Examiner is confusing a “specular image” with “glare,” and this is evident from his statement that “the vast majority of knives ... reflect at least some image.” The Examiner apparently means that if a typical blade is held as if to reflect light from, say, a light bulb, a

diffuse blob of light will be seen in the blade, corresponding more or less in size to the light bulb. But this is not an *image*: the outline of the bulb, the writing on the end of the bulb, and all other details are missing. The vast majority of knives glare, but do not reflect an *image*.

The Appellant at page 9, line 18, of the specification, defined a “specular” surface as one in which “any reflected image is seen.” A reflected image can be weak or strong: for example, a reflection in a window is not as strong as a reflection in a mirror. The Examiner appears to confuse a weak, specular image with non-specular glare.

At the top of page 7, the Examiner states that “the Appellant has attempted to redefine 'specular' according to ... Bennett & Mattson.” The Appellant respectfully but strenuously traverses this characterization: the extrapolated graph of Bennett & Mattsson is based on the amount of scattering of a laser beam away from the single direction of specular reflection, and is a direct measure of specularity as defined by the Appellant.

If all rays of light are reflected at an angle of reflection exactly equal to the angle of incidence, the surface is specular; if only some rays of light are reflected at an angle of reflection exactly equal to the angle of incidence, the surface is specular but weakly so (reflecting “at least some image”); and if *all* rays of light are reflected at an angle of reflection *not* exactly equal to the angle of incidence, the surface glares.

(5) The Appellant notes that while the Examiner asserts that the vast majority of blades are specular, he presents no evidence either by citation, argument, or affidavit for this statement. The Examiner refers to “a plethora of empirical evidence” (page 6) but does not specify what this evidence is, where to find it, or from what experience or experiment it was derived.

Moreover, even if a blade is specular overall, it need not be specular at the edge, where the vast majority of blades are sharpened on *both* sides by grinding, so that there is no specular surface at the edge, contrary to the Appellant's claims.

(6) The Examiner admits that Machinery's Handbook is not an applied reference (end of last paragraph on page 7).¹ On the basis of the Examiner's statement, the Appellant respectfully submits that the honorable Board should give no weight to this reference.

First, Machinery's Handbook is not applied. If the Examiner intends to rely on Machinery's Handbook, then he should re-open prosecution; and if not, it should not be considered by the honorable Board.

Second, MPEP § 2131.01 permits a second reference to be applied in a rejection under §102 to “Show that a characteristic not disclosed in the reference is inherent,” but states, “Such evidence must make clear that the missing descriptive matter *is necessarily present* in the described” (emphasis added).

¹ In the Brief at page 6, the Appellant incorrectly stated that Machinery's Handbook is applied but not cited. Actually, Machinery's Handbook is listed on the PTO-892 attached to the final rejection, so it is cited but is not applied.

Here, that is not the case because Machinery's Handbook only gives a broad range of surface roughness and nothing more, while the actual reference, Gerber, discusses the roughness at some length without disclosing the Appellant's claims.

The Examiner states that Machinery's Handbook is applied in the manner of a dictionary, but a dictionary is to be only relied upon when the appellant's specification does not define a term. In this case, the Appellant, acting as his own lexicographer, has himself defined the term at issue (“specular”) and has presented strong, authoritative evidence (Bennett and Mattson) of just what the definition means in terms of surface roughness. Machinery's Handbook is being applied for a matter of fact (the roughness range of grinding) and not for a matter of interpretation.

(7) At pages 7-8 of the Answer, the Examiner notes the Appellant's argument that it is improper to select one end of a range, and asserts, “Since a smooth surface is desired, one skilled in the art would use the finest grit possible.” This statement is respectfully submitted to contain two errors: first, the prior art presents no desire for a smooth surface—that is the Appellant's desire; and second, the person skilled in the art does not enter into the rejection of claims 1 and 6 now at issue, because the rejection is made under § 102 and not under § 103. The question is, “does Gerber disclose using the finest grit possible,” and the answer to that question is “no.”

(8) The Examiner discusses the Bennett and Mattsson graph on page 8, and notes that scattering varies with the wavelength of the light. The Examiner also appears to questions whether Bennett and Mattsson is applicable (page 9), to which the Appellant responds that Bennett and Mattsson is the best evidence relating reflection to surface roughness and that is still at issue.

There is a factual question of whether the range of surface roughness of “grinding” overlaps the range of surface roughness of “specularity.” The honorable Board is invited to consider that the question of overlap is not the main question. The main question as to claim 1 is, Does Gerber disclose a specular surface? It does not, and the Examiner must rely on a secondary reference, Machinery's Handbook, which is legally questionable both for the status of the second reference and the fact that it discloses specularity, if at all, at the extreme end of a range spanning eight doublings, i.e., $6.3/0.012 = 512$ times.

For the reason above, the honorable Board is requested to overturn the rejections and allow the claims.

Respectfully submitted,

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